



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX

75 Hawthorne Street
San Francisco, CA

March 30, 2018

George ("Pat") Brooks
US Department of the Navy
33000 Nixie Way, Bldg 50
San Diego, CA 92147

Dear Mr. Brooks:

Thank you for providing for review the *Draft Radiological Data Evaluation Findings Report for Parcels D-2, UC-1, UC-2, UC-2, and UC-3 Soil* ("Report"), Former Hunter's Point Naval Shipyard, October 2017. The U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), and the California Department of Public Health (CDPH) have independently reviewed this report in detail with a technical team including national experts in health physics, geology, and statistics, and EPA's comments are attached.

In these parcels, the Navy recommended resampling in 61% of soil survey units in trenches and fill. EPA, DTSC, and CDPH found signs of potential falsification, data manipulation, and/or data quality concerns that call into question the reliability of soil data in an additional 32% of survey units, bringing to 93% the total suspect units. In summary, the data analyzed demonstrate a widespread pattern of practices that appear to show deliberate falsification, failure to perform the work in a manner required to ensure ROD requirements were met, or both.

Attached are 1) narrative comments, 2) spreadsheets with reviews of individual trench units, and 3) spreadsheets for fill units. EPA previously submitted comments December 29, 2018, on the Navy's similar report for Parcels B and G. Most of these previous comments address the overall evaluation, so they also apply to this report. They are not repeated in the attached narrative comments but are incorporated by reference.

We look forward to working with the Navy to scope out and begin the sampling component of the radiological assessment effort as soon as possible. If you would like to discuss any of these comments, please contact me at 415-947-4187 or lee.lily@epa.gov. You may also contact my manager John Chesnutt at 415-972-3005 or chesnutt.john@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Lily Lee", is positioned above the typed name.

Lily Lee, Remedial Project Manager

Attachments

cc: Nina Bacey, DTSC
Tracy Jue, CDPH
David Tanouye, RWQCB
Amy Brownell, SFDPH

**USEPA Review of the Draft Radiological Data Evaluation Findings Report for
Parcels D2, UC-1, UC-2, UC-3 Soil, Former Hunter's Point Naval Shipyard,
San Francisco, California, Draft dated October 2017
USEPA Comments dated March, 2018**

GENERAL COMMENTS

1. EPA previously submitted comments December 29, 2018, on the Navy's similar report for Parcels B and G. Most of these previous comments address the overall evaluation, so they also apply to this report. They are not repeated in the attached narrative comments but are incorporated by reference.
2. Section 1 (Introduction) of the Draft *Radiological Data Evaluation Findings Report for Parcels D-2, UC-1, UC-2, and UC-3 Soil*, Former Hunter's Point Naval Shipyard, October 2017 (the Report) should clarify the authors of the report. Section 1 states that the Navy assembled a Technical Team (a group of technical experts) that includes representatives from the regulatory agencies. That statement would only be appropriate if the final version presents a consensus conclusion. If, however, the next version of the report intends to place regulatory reviews in a separate part of the report, then please revise the language accordingly to reflect accurately any relevant distinctions.
3. The Report includes language about a proposal to reanalyze archived samples (e.g. in Section 4, page 4-1, bullet 2. However, the Navy has not recommended this approach for any of the survey units in this report. For clarity, please either add to the text that this approach was considered but has not been recommended for any of the Parcels in this report or just remove it from both the text and from the Figures in Section 4 that reference this approach. For the record, EPA previous comments rejected this approach for several reasons.
4. In these parcels, the Navy recommended resampling in 61% of soil survey units in trenches and fill. EPA, DTSC, and CDPH found signs of potential falsification, data manipulation, and/or data quality concerns that call into question the reliability of soil data in an additional 32% of survey units, bringing to 93% the total suspect soil survey units. In summary, the data analyzed demonstrate a widespread pattern of practices that appear to show deliberate falsification, failure to perform the work in a manner required to ensure ROD requirements were met, or both. Please see attached tables that summarize the results in the attached spreadsheets.
5. Biased samples were not collected for several trench units (TUs). The text states that the Survey Unit Project Report (SUPR) for a TU indicated "no additional biased sampling was performed since the bottom of the trench was native serpentine rock." In several cases, biased sampling should have been done because elevated concentrations were found in removed piping. Because required biased samples were not collected, the recommendations for these TUs should include additional data collection to provide sufficient data to demonstrate compliance with the ROD requirements. Please revise the Report to recommend additional sample collection to address this deficiency at TUs where biased samples were not collected in areas where gamma scan surveys indicated elevated activity.

SPECIFIC COMMENTS

1. **Section 4.2.1.1, Trench Unit 140, Page 4-4:** The recommendation for confirmation sampling should also include the need to conduct a gamma scan. This trench unit (TU) was identified for confirmation sampling based on elevated gamma scan readings of up to 11,190 counts per minute (cpm) compared to the investigation level of 7,013 cpm because there was no response to address the elevated gamma scan readings. To locate the elevated gamma scan readings, it will be necessary to excavate this trench and rescan the trench walls and bottom. Please ensure that TU140 is classified as a Class 1 Survey Unit (SU) and a new Final Status Survey (FSS), which includes a gamma scan survey, is recommended for TU 140 and for all other TUs where the problem of failing to respond to elevated gamma scan results was identified.
2. **Section 4.2.1.1, Trench Unit 147, Page 4-5:** This TU was recommended for resampling because biased samples were not collected and because the final systematic sample results were suspect; however, the low end of the gamma scan was unusually low (940 cpm), so this TU should also be recommended for a new Class 1 SU FSS which includes a gamma scan survey. Please revise the recommendation to specify that TU 147 will be classified as a Class 1 SU and will be subject to a new FSS.
3. **Section 4.4.1.1, Trench Unit 177, Page 4-17 and Trench Unit 190, Pages 4-17 and 4-18:** The text states that “inconsistencies were observed in data from the adjacent trench unit” (TU 178), but the text does not include a subsection discussing TU 178. There is a similar statement about TU 180 in the discussion of Trench Unit 190, but TU 180 is not included in the text. Please revise the text to include subsections that discuss the data inconsistencies in TU 178 and TU 180.

Table 1 – Summary of Reviews of Trench and Fill Units

	Trench	Fill	Building Sites	Total	% of total
Tota Survey Units in Parcels UC-1,2,3 & D-2	48	80	0	128	100%
Navy recommended resampling	23	55	0	78	61%
Navy recommended reanalyzing archived samples	2	0	0	2	2%
EPA, CDPH, DTSC recommend resampling	18	23	0	41	32%
Total recommended resampling	41	78	0	119	93%
No signs of falsification found in data	6	2	0	8	6%
EPA not yet reviewed	1	0	0	0	0%
% of total recommended resampling	85%	98%	N/A	93%	

The above was for these parcels alone. Below is for entire Shipyard.

Total Survey Units in Hunters Pt Tetra Tech EC	305	514	*
Parcels D-2 & UC-1,2,3 as % of total	16%	16%	*

Table 2 – Summary of Reviews of Trench Units, by Parcel

Number of TU's				Total	% of Parcel UC's & D-2 total	
Parcel D-2	Parcel UC-1	Parcel UC-2	Parcel UC-3			
7	12	8	21	48	100%	Total trench units in Parcel UC's & D-2
<i>Navy reviewed all Trench Units to look for signs of potential falsification</i>						
1	9	8	5	23	14%	Navy recommended confirmation sampling due to signs of potential falsification
0	0	0	0	0	0%	Navy recommended reanalysis of archived samples
6	3	0	16	25	86%	Navy recommended NFA = No further action due to signs of falsification,
<i>EPA reviewed the Trench Units recommended for NFA</i>						
2	0	0	4	6	29%	but potential further action due to uncertainty
0	0	0	0	0	0%	EPA score 0 = No specific findings of particular concern
4	3	0	11	18	57%	EPA Score 1 = Need further review
<i>Total Navy and EPA recommend for resampling</i>						
5	12	8	16	41	71%	EPA Score 2 = Need resampling before determination that the record supports ROD requirements met

Table 3 – Summary of Reviews of Fill Units, by Parcel

	Total	% of total	D-2	UC-1	UC-2	UC-3
Total Survey Units in Parcels UC-1,2,3 & D-2	80	100%	5	26	20	29
Navy recommended resampling	55	69%	4	14	13	24
Navy recommended reanalyzing archived samples	0	0%	0	0	0	0
DTSC recommended resampling	23	29%	1	12	6	4
Total recommended resampling	78	98%	5	26	19	28
No signs of falsification found in data	2	3%	0	0	1	1
% of total recommended resampling	98%		100%	100%	95%	97%